AUSTRALIAN SOCIETY FOR LIMNOLOGY

NEWSLETTER

VOLUME 27. NUMBER 4.
NOVEMBER 1989

Registered by Australia Post
Publication No. WBG2179

Australian Society for Limnology

Office-Bearers - 1989/90

President:	Dr Rod Oliver
.....	MDRFC, PO Box 921, Albury, NSW,2640
.....	(060) 431 004
Vice-President:	Dr Stuart Bunn
.....	School of AES
.....	Grifith University
.....	Nathan, Qld.,4111
.....	(07) 275 7407
Immediate Past	Dr Jenny Davis
President:	Biological and Environmental Sciences,
.....	Murdoch University,
.....	Murdoch WA 6150
.....	(09) 332 2628
Membership	Mrs Margaret Hart
Officer/Treasurer:	22 Netherby Avenue, Mulgrave,
.....	Vic.,3170
.....	(03) 560 4406
Secretary:	Dr Richard Marchant
.....	Museum of Victoria,
.....	71 Victoria Crescent,
.....	Abbotsford, Vic., 3067
.....	(03) 419 5200
Newsletter Editor	Dr Jenny Davis
.....	Biological and Environmental Sciences,
.....	Murdoch University,
.....	Murdoch WA 6150
.....	(09) 332 2628
Presentation and Layout;	Fiona Whittles
Editorial Assistance:	Fiona Whittles, Colleen Hubbard
.....	Murdoch University,
.....	Murdoch WA 6150
Cover Design:	

Australian Society for Limnology Newsletter

Volume 27 Number 4 November 1989

CONTENTS

Membership details..... 1

Editorial..... 2

President's Report..... 3

More Changes to the Constituion..... 5

Rules for Student Travel Awards..... 8

The ASL Bulletin..... 10

The RAMSAR Convention..... 13

24th SIL Congress..... 15

Jabiru 1990- Informal Session on Wetlands..... 19

State and Territory Affairs..... 20

Towards a Biological Council of Australia (contd.)..... 25

Notes from FASTS..... 34

Book Review..... 37

An Ecological Lament..... 41

Limnological Bibliography..... 44

Coming Events..... 46

Material for publication in the February issue of the Newsletter should be sent to the Editor before 21 st January 1989.
Fax (09) 332 2507.

Long articles would be appreciatively received in any one of the following three modes: as camera-ready laser printed copy (New York, 12pt, fully justified), as formatted text on Macintosh disc, or as unformatted text on IBM or IBM compatible discs.

Australian Society for Limnology

The Australian Society for Limnology is an association of over 400 people with professional or amateur interests related to Australian inland waters. Since its inception in 1961, the Society has played an important role in fostering limnology in this country. The ASL promotes liaison between limnologists in academic, private and governmental institutions and has a vested interest in the conservation of aquatic and related resources. Annual conferences are held near centres of limnological interest, and the programme includes scientific sessions, field excursions and social activities.

The ASL produces a newsletter with notes on activities, articles of general interest, book reviews and conference announcements; a Bulletin of original scientific papers and occasional Special Publications. A further publication is the Directory of Australian Limnologists.

Membership details

Membership applications are welcome; five classes of subscribing membership are available:

Ordinary Members:	$20.00
Student Members:	$10.00
Life Members:	$200.00
Institutional Members:	Fees on application
Sustaining Members:	Fees on application

Membership subscriptions cover the period from 1 July to 30 June and members receive all publications. Members may also choose to receive the Australian Journal of Marine and Freshwater Research, the Australian Journal of Zoology and/or the Australian Journal of Botany at reduced rates. The subscription period for each journal is the calendar year following the year in which the subscription is paid.

Enquiries relating to membership should be directed to:

Mrs M. Hart
Treasurer/Membership Officer ASL
22 Netherby Avenue
Mulgrave Vic. 3170
(03) 560 4406

EDITORIAL

Items to draw your attention to in this newsletter include :

... the conference brochure and registration form for Jabiru - it should be a great conference - airlines permitting !

... the ballot paper regarding the changes to the Constitution - please be a responsible ASL member and return it to Richard Marchant by December 20 th.

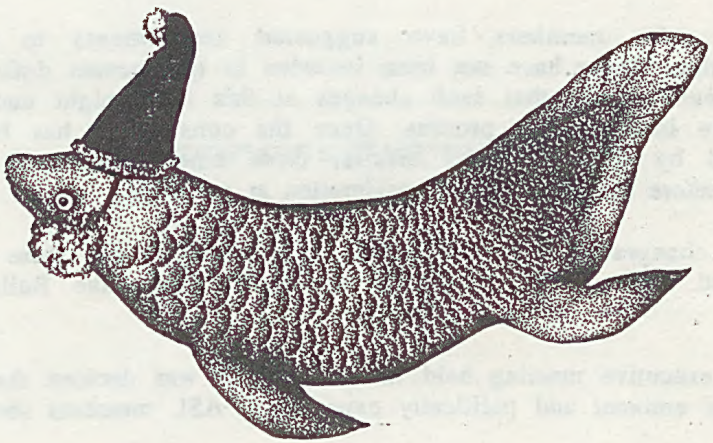
... the Student Travel Award details - please encourage honours and postgrad students to apply - they probably won't if you don't!

... the statement from FASTS detailing concerns re the corporatisation of Primary Industries and Energy . This issue is fairly central to the fate of AWRAC and so is a matter of serious concern to Australian limnologists.

This edition of the newsletter will be the last one to receive Fiona Whittles hard working and distinctive input because Fiona is about to leave Perth for Jervis Bay, NSW. Many thanks Fiona for the time and effort that you have devoted to the newsletter in the last 12 months. Fiona will be looking for work in the Jervis Bay - Nowra area so if you need an extremely competent and enthusiastic limnologist/ aquatic scientist / environmental biologist contact Murdoch and I will provide her new address.

Merry Christmas

Jenny Davis



PRESIDENT'S REPORT

Yet another successful Teleconference Executive Meeting was held on Tuesday 17th October. Few hitches occurred, except for the attempt to contact Richard Norris on his FAX line, and eventually nine committee members were linked across the nation. Unfortunately we never did locate Richard, I guess someone warned him.

Participants in the meeting were Stuart Bunn (Qld), Jenny Davis (WA), Margaret Hart (VIC), Richard Marchant (VIC), Naomi Rea (SA), Adrian Pinder (WA), Angela Arthington (QLD) and Colin Heath and myself (NSW).

Considering the somewhat intimidating nature of teleconferences, items on the extensive agenda were well discussed. Undoubtedly the teleconference meetings are a great success and enable the elected members of the executive to readily participate in the decison making process.

Major items on the agenda included alterations to the proposed ASL constitution, changes to the ASL Bulletin and the formation of a lobbying advisory group.

Alterations are needed to the proposed constitution to make it acceptable to the Corporate Affairs of Victoria. The details of these changes are discussed elsewhere in the Newsletter by Richard Marchant. Quite a lot of time has already been spent on this exercise and it is important that the incorporation process goes ahead as quickly as possible, so I urge you all to accept the proposed alterations and send in the voting slips.

A few ASL members have suggested amendments to the constitution. These have not been included in the present draft as the executive feels that such changes at this time might unduly slow the incorporation process. Once the constitution has been accepted by the Corporate Affairs, these amendments will be placed before the society for consideration at an AGM.

Radical changes have been outlined for the Bulletin and these are described later in the Newsletter by Stuart Bunn, the Bulletin editor.

At the executive meeting held in Canberra, it was decided that a group of eminent and politically experienced ASL members should

be formed, to advise the executive on the appropriateness and timing of the society's responses to government decisions affecting water research. Angela Arthington, Peter Cullen, Bill Williams and Barry Hart were invited to form the group and I am pleased to say all have accepted. Of course, the executive considers advice received from any ASL member, however in the past this has frequently arrived late in the piece when opportunities for effective comment were reduced. It is hoped that the new advisory group will enable the executive to make timely and effective input to major debates influencing the future of water resources research.

The details of registration and a call for papers for the 1990 ASL Congress at Jabiru are enclosed in this Newsletter. This is a conference not to be missed. Remember, if you want first choice of the accommodation and field trips you will need to register early. This will also assist the organisers with their planning. Students have two opportunities to obtain assistance with costs. As usual ASL is offering Student Travel Awards (see later in Newsletter for conditions), and this year the conference.organisers are also providing some awards. Competition will undoubtedly be tough, but it is worth the effort. Hope to see you there.

.....Rod Oliver

More changes to the Constitution

After the AGM in July I submitted the ASL's revised Constitution to Corporate Affairs Victoria as part of the procedure for incorporating the society. Unfortunately, this revised version was not acceptable to Corporate Affairs; fortunately the changes they require are not major. The rules that need changing are: 4, 6, 8, 13 and 16. I, in consultation with the Executive Committee, have altered these rules to conform (I hope) with what Corporate Affairs require. The altered rules are reproduced below. Please note that clause 4(c) is an additional clause, not an existing clause that has been altered.

If you agree with these changes to the Constitution please would you tick "yes" on the enclosed ballot paper and return the ballot to me by 20th December 1989. This procedure constitutes an amendment to the Constitution by means of postal ballot, as allowed under the present rules.

.....Richard Marchant, Secretary

(Changes and additions are marked with an * and *Italics*)

4

**MEMBERSHIP* *(c) Disciplinary action may be taken by the Executive Committee against members who infringe the Constitution. Any member so charged may be expelled from the Society by the Executive Committee. A member can appeal against such action within thirty days.. Appeals will be heard by a special committee of three Executive Committee members set up by the Executive Committee.*

6

**ANNUAL SUBSCRIPTION The funds for the Society will be derived from annual subscriptions, donations and such other sources as the Executive Committee determines.* The annual subscription shall be due on 1 July in each year and the amount shall be fixed at the preceding Annual General Meeting. Members whose subscriptions are not paid by the succeeding 31 December shall be unfinancial and shall forfeit all rights and privileges of membership forthwith.

8.

MANAGEMENT The Society shall be managed by an Executive Committee consisting of the President, the immediate Past President (ex officio), the Vice President, the Secretary, and the Treasurer/Membership Officer, together with not less than five

and no more than eight other Committee Members, all of whom shall be elected at the Annual General Meeting. The position of Secretary and Treasurer/Membership Officer may be held by the one person. This Executive Committee shall implement the Society's general business, and a simple majority shall decide all questions at Executive Committee Meetings. If voting is equal, a motion is lost. A quorum at Executive Committee Meetings shall be four. * *In the event of casual vacancies on the Executive Committee the Committee may appoint any suitable member of the Society to the vacant position.*

13.
**AMENDMENTS TO THE CONSTITUTION AND STATEMENT OF OBJECTIVES Amendments may be made to the Constitution and statement of* objectives of the Society at an Annual General Meeting, or at a Special General Meeting, or by a postal vote. Any proposed amendments shall be submitted in writing over the signature of any two members of the Executive Committee which shall either :

16.
WINDING-UP OF SOCIETY The Society shall not be wound up except :
(a) on a **three-quarters* vote in favour of doing so at an Annual General Meeting or at a Special General Meeting called for this purpose, and in either case at least *21* day's notice of the proposal shall have been given to all Financial Members, or

Please return this ballot paper to:-

Dr. Richard Marchant
Museum of Victoria
71 Victoria Crescent
Abbotsford
Vic. 3067

DON'T FORGET TO VOTE

RULES FOR STUDENT TRAVEL AWARDS

Assistance by ASL for Limnology Research Students to Present Research Results at the Annual Congress :

Applications are invited from limnology research students for assistance in meeting the expenses associated with attendance and presentation of a paper on their work at the 29th Annual Congress of the Australian Society for Limnology to be held in Jabiru, NT from 19-23rd April 1990. The purpose of this assistance is to bring the results of significant limnological research in Australia to the attention of those who can make use of it. It is also aimed at encouraging students to present the results of their work in public. The following rules apply to this assistance:

1. Assistance shall be granted on the recommendation of a panel of three appointed by the Society.

2. A maximum of five awards to a maximum total of $2000, will be made this year.

3. Applicants must be full-time postgraduate students at any Australian University, College of Advanced Education or Institute of Technology. there is no age limitation. Applicants must have been current financial members of the Australian Society for Limnology for at least 6 months.

4. Applications will be invited from students who are carrying out fundamental or applied research in any branch of limnology for the purpose of a higher degree.

5. Applications shall include a written statement of no more than 2000 words describing the research currently under study, its significance to the community and the stage that has been reached. This statement must be endorsed by the Student's Supervisor. It will also include an abstract of the proposed paper which would be given at the Congress if assistance is granted.

6. Award of assistance shall be judged on the following criteria : (i) Significance of the work to the community (ii) Originality and soundess of the research (iii) The progress made and whether the stage has been reached where something useful can be presented. (iv) Ability to present a clear and concise statement of the research study.

7. Applications and submissions must be lodged with Dr Richard Marchant, Museum of Victoria, 71 Victoria Crescent, Abbotsford, 3067, by the 1st of Feb 1990. The students to whom assistance is granted will be informed by the 28th Feb 1990.

Put it this way, if our ancestors survived by getting out of the primordial slime why shouldn't we?

September 1987, DUBLIN OPINION

FATE OF THE BULLETIN

The fate of the Bulletin has been discussed at great length during recent meetings of the ASL Executive, and no doubt has been a topic of debate at many other meetings since it began! Despite all of the arguments that have been proffered in the past to keep the Bulletin running, there now are unacceptable delays in publication and the days of the Bulletin appear to be numbered. I am relieved to add that this cannot be attributed to apathy on the part of the Editor, nor is it due to an extremely severe refereeing process or general poor quality of submissions. The problem is simply the dwindling supply of manuscripts submitted for publication. No manuscripts were outstanding after the publication of Bulletin No.12 and I have received only one (1) manuscript since taking over as Editor. At the present rate of submission, Bulletin 13 might be published some time in 1992 if at all. Such delays are simply unacceptable, particularly for the authors who, justifiably, would like to see their paper in print. (Some of us might not live that long!)

One hypothesis to explain the low number of manuscript submissions is that Australian limnologists are no longer doing any interesting research, or at least are not doing anything worth writing about! This is hardly supported by the number of high quality papers presented at each Congress. An alternative explanation is that the Bulletin duplicates other journals. Most research papers, both large and small, on Australian limnology are undoubtedly better placed in a journal with a sound international reputation. AJMFR admirably fills this role and actively encourages ASL members to submit manuscripts. Papers with a more regional or descriptive flavour are well catered for in most States by the Proceedings of the Royal Society, or Museum Records, for example.

Several people have argued that the Bulletin is ideal for papers which are "not quite suited" for publication in these "hard core" (more strictly refereed?) journals. However, if we intend to publish data papers in the Bulletin, I believe we must still maintain a high standard of peer review. The Bulletin articles are cited by many of us as a source of reliable information and we must be sure that this is indeed the case. If we do not maintain a high standard, the Bulletin could become a vehicle for rejected papers from other journals, particularly now when we are desperately short of submitted material.

These problems were highlighted at the AGM held at the 28th Congress in Canberra and, after some discussion and very little dissention, the Executive's recommendation that the criteria for submission of articles to the Bulletin be revised, was accepted. Individual papers, e.g. small research papers, methods papers, taxonomic notes, will no longer be considered for publication by the Bulletin. Papers of a more thematic nature will be encouraged, e.g. keynote and Jolly Award addresses from each ASL Congress, proceedings of specialized workshops, and taxonomic keys similar to the recently published key to Tasmanian stoneflies (Special Publication No.8). A key to the mayflies of southeastern Australia and possibly one on larval chironomids (to genera) have already been proposed. The important criterion for future submissions to the Bulletin is that each will now form a single issue. (Note: The revised criteria are published in detail elsewhere in this edition of the Newsletter.)

I am certain that some members will object strongly to the proposed changes to the Bulletin but remember, the bottom line is that we simply do not receive enough papers for it to continue in its present form. Revising the criteria of the Bulletin is seen as a much more acceptable alternative to abandoning it completely.

If you have any alternative suggestions or if you strongly object to the proposed changes, please contact either myself or your local Executive Committee member. All objections should, however, be accompanied by sufficient manuscripts to form a single issue of the Bulletin!

Stuart Bunn
Editor, Bulletin and Special Publications

BULL AUST SOC LIMNOL

REVISED INSTRUCTIONS FOR AUTHORS

The *Bulletin of the Australian Society for Limnology* welcomes **original contributions** on all aspects of limnology, but particularly those of a thematic nature (e.g. proceedings of specialized workshops, keynote addresses from Congresses, taxonomic keys, and collections of papers with a central theme). Papers not directly related to Australia, New Zealand or New Guinea may not be accepted.

Each submission must be suitable for publication as a single issue of the Bulletin. Individual papers, e.g. small research papers, methods papers, taxonomic notes, can no longer be considered due to unavoidable delays in publication.

Preparation of manuscripts

Authors should adhere to the following guidelines and consult a recent issue of the *Bulletin* for general style and format.

Manuscripts are to be typed, double-spaced and submitted in duplicate.

Line drawings, graphs and photographs must be kept to a minimum.

Abbreviated titles of journals cited in *References* must conform with abbreviations from the *World List of Scientific Periodicals*.

All papers will be refereed.

25 reprints will be made available to the author free of charge. Additional reprints will be provided at cost.

All communications should be addressed to the Editor,

Dr Stuart Bunn
Division of Australian Environmental Studies
Griffith University
Nathan
Queensland 4111

(07) 275 7407 Fax (07) 275 7459

The "Ramsar" Convention

The "Ramsar" Convention - so called because the text was agreed at a conference in the city of Ramsar on the Iranian Caspian in 1971 - is the first of.the modern global intergovernmental agreements on conservation. It preceded the famous Stockholm conference in 1971 and was followed by CITES, the World Heritage Convention and the Convention on Migratory Species. As its full name ("Convention on wetlands of international importance especially as waterfowl habitat") indicates, it is the only one of the four dealing specifically with one habitat type, wetlands.

Initial calls for the establishment of the Convention came from ornithological interests, and in particular the International Waterfowl and Wetlands Research Bureau. Governments which become Contracting parties to the treaty however accept very wide-ranging obligations :

- to designate at least one wetland in their territory for the Ramsar "List of wetlands of international importance";

- to make wise use of wetlands, whether or not they are on the List;

- to establish nature reserves in wetlands;

- to consult with one another on implementing obligations under the Convention.

In the early days of the Convention, industrialized countries were more rapid in joining the Convention, and they placed greatest emphasis on designating wetlands for the List; more recently, much greater interest has been shown by developing countries and the emphasis has shifted to "wise use" and to international cooperation and consultation; this cooperation includes a search among Contracting Parties in the industrialized world for finance of wetland projects in developing countries.

Australia was in fact the very first state to become a Contracting Party - in 1974 on the occasion of the International Ornithological Congress. On that occasion, Cobourg Peninsula in the Northern Territory was designated for the List; since then one further site in the Northern Territory has been designated, ten in Tasmania, ten in Victoria, three in New South Wales and four in South Australia. The procedure for listing in Australia is for the state government to submit proposals to CONCOM which checks them against the

Ramsar criteria; if they meet the criteria the Australian National Parks and Wildlife Service sends the designation to the Convention secretariat. At present, 29 Australian sites covering 3.3 million hectares figure on the List. it is hoped that further sites may be designated, notably from Western Australia and Queensland.

At present 52 countries have become Contracting Parties. These include practically all those from the industrialized world of Europe, North America, Asia and Oceania. Coverage in the northern half of Africa is fairly good, but there are still many gaps in southern America, the southern half of Africa, and especially in southeast Asia - an area of special interest to Australia. The 52 Contracting Parties have at present designated 434 sites for the list, covering an area of nearly 30 million hectares (i.e. the size of New Zealand or Ecuador).

The Convention is governed by meetings of the Conference of the Contracting Parties, which review the administration and finances of the Convention, hear national reports and special reports from international bodies and give guidance to the Standing Committee and Bureau (or secretariat). The Bureau, established on a permanent basis only in 1988, is hosted partly by IUCN in Switzerland, partly by IWRB in UK. The Bureau will be happy to provide further information : brochures, newsletters, proceedings. The next meeting of Conference will take place in Montreux, Switzerland, in June/July 1990 and will be giving special prominence to wise use of wetlands. We look forward to a major input from Australia - and its fellow member and Oceanian representative on the Standing Committee - New Zealand.

Michael Smart Conservation Coordinator, Ramsar Bureau, Slimbridge, Gloucester, GL2 7BX, UK

WELCOME TO "NATURE TIME"
FISH EAT THE INSECTS, BIRDS EAT THE FISH, CATS EAT THE BIRDS...
THAT'S ENOUGH!
I DON'T WANT TO KNOW ABOUT IT
© A. United Feature Syndicate, Inc.

24th Congress of the International Association of Limnology Munich, West Germany, 13-19th August 1989

Your Editor has asked me to write a short report of the 24th SIL Congress for the ASL Newsletter. How can I do this before the memory traces fail, but whilst I remain jet-lagged and shattered by the experience of attending a conference with about 1,500 participants, spanning five days, in the middle of a large modern European city and temperatures often in excess of 35 C?

Let me begin at least by saying that, as always, SIL Congresses are individually great experiences. One meets old friends, makes new contacts, learns much that is new, feels humbled, elated, tired, stimulated - and swears never to repeat the experience - until the next congress circulars arrived on the desk. The Munich Congress was no different in overall ethos from all those I have previously attended.

A very large number of papers (both oral and poster) were presented including an increased number of plenary lectures. These (for the record) were as follows :

R.G. Wetzel : "Land-water interface : metabolic and limnological regulators.

H.J. Elster & J. Overbeck : "Initial, present and future aim of limnology"

J. Imberger : Turbulence and mixing in a lake : some recent results and their implication for the limnologist"

F. Aram : "New concepts and prospects in aquatic microbial environments"

S. Jorgensen : "The application of models in aquatic ecosystem research"

S. Bjork : "Governing ecosystems for sustainable function"

B. Whitton : "Ecology of large rivers"

J. Shapiro : "Current belief regarding dominance of blue-greens"

B. Statzner : "Flow patterns and predictability in stream ecology"

M. Straskraba : "Pelagic freshwater productivity analysis by dynamic models"

P. & S. Kilham : "Tropical limnology : do african lakes violate the 'first law' of limnology"

W. Vincent : "The physiological ecology of algal photosynthesis and its relevance to productivity and succession"

All will appear in the Verhandlungen in 1991 (or whenever). Most were extremely interesting and do not deserve to wait 2+ years that it usually takes for the Verhandlungen to appear. In my opinion, SIL would be well served if it were to increase the number of review or plenary papers presented at the expense of the smaller concurrently-read papers. Perhaps these could then be published in a single volume for separate sale.

One of the more important side events to SIL of course were various notices about forthcoming meetings elsewhere, about new books, equipment and so on.

Some meetings for which notices were given and that were of interest to me and perhaps the other Australian limnologists were as follows :

1. 11th International Symposium on Chironomidae, 12-15 August 1991, Amsterdam. Further information is available from Dr. F. Heinis, Department of Aquatic Ecology, University of Amsterdam, Kruislaan 320, 1098 SM Amsterdam, The Netherlands.

2. A proposed conference on Tropical Freshwater Ecology : Problems, Solutions and Perspectives". It is intended to hold this in Hong Kong in September 1991. Interested persons should write to Dr.D. Dudgeon, Department of Zoology, University of Hong Kong, Hong Kong.

3. Aquatic Ecosystems in Semi-arid Regions : Implications for Resource Management, 27-30 August 1990, Saskatoon, Saskatchewan, Canada. Those in September 1991. Interested persons should write to Dr. R D Robarts, interested should write to Dr R D Robarts, National Hydrology Research Institute, 11 Innovation Bouldevard, Saskatoon, Saskatchewan, Canada 27N 3H5.

There were a number of book notices available. Some that Australian limnologists would find of interest are as follows ;

Burgis, M.J. & Symoens, J.J. (eds) (1987). African Wetlands and Shallow Water Bodies. ORSTROM. 650p. ISBN 2-7099-0882-4.

Dejoux, C. La Pollution des eaux Continentales Africaines. ORSTOM.

Editions de l'ORSTOM (1980-1981). Flore et fauna Aquatiques de l'Afrique Sahelo-Soundanienne. (2 volumes)

Dussart, B. (1989) Crustaces Copepodes Calanoides des eaux Interieures d'Afrique. E.J. Brill, Leiden. 152 pp. ISBN 90 04 09053 3.

Salanki, J. and Herodek, S. (1989). Conservation and Management of Lakes. Symposia Biologica Hungarica 38. Akademiai Kiado, Budapest. 660 pp. ISBN 963 05 5583 2

Iltis, A. and Dejoux, D. Hydrobiologie due Lac Titicaca. ORSTOM.

Several publishing houses had displays including, notably, Schweizerbart'sche and Kluwer. The Akademie fur Naturschutz und Landschaftspflege had on display and on sale a most important book in my view, Wirkungen von UV-8-Strahlung auf Pflanzen und Tiere. For those who don't read German, it's concerned with the effect of UV radiation on the biological world. Kluwer had a large number of books on display including one that has recently appeared : Bruton, M.N. (ed.) (1989). Alternative Life-History Styles of Animals. ISBN 90-6193-662-4. This looks to be a most interesting book. There was also an advance note about a forthcoming book concerning the inland waters of southern Africa: Allanson, B.R., Hart, R.C., O'Keeffe, J.H. and Robarts, R.D. (1989). Inland Waters of Southern Africa ; An Ecological Perspective. Monographiae Biologicae.

Kluwer Schweizerbart'sche had on sale a number of books, one of which I had been wanting to have for some years, The Autobiography of August Thienemann. Wiley had a good display and one of the books I ordered from them whilst there was the one by Schwoerbel, Handbook of Limnology, $US 74.05 (ouch!). I had previously obtained another book in the Wiley series, Abel, P.D., Water Pollution Biology, $US 71.40 (again, ouch!).

Of journals that were on display and which may be of interest, the following came to my attention :

Land Degradation and Rehabilitation (new). Wiley

International Journal of Climatology. Wiley.

Regulated Rivers : Research and Management. Wiley [Keith Walker knows all about this journal]

Hydrological Processes. Wiley.

Limnologica. Akademie-Verlag, Berlin.

Stygologia SPB Academic Publishing, The Hague.

Fish ökologie.

One piece of apparatus that struck me as of some interest was manufactured by Dohrmann Division (a German firm). The leaflet is entitled 'The Next Step in Automated TOC Analysis'. Unfortunately it costs plenty.

Another leaflet that may be of interest concerned the Aquatic Ecosystem Health and Management Society. This international society is dedicated to the quality and integrity of global aquatic environments. If you are interested in this or would like to be a member of it write to Dr. M. Munawar, Department of Fisheries and Oceans, Canada Centre for Inland Waters, P.O. Box 5050, 867 Lakeshore Road, Burlington, Ontario, Canada L7R 4A6.

The next congress is scheduled for Barcelona, Spain, 23-30 August, 1992. The two succeeding ones are planned for Brazil (1995) and Ireland (1998).

I cannot help concluding this review without referring to the official Congress agents ICONTAS. It appears that they used every trick in the book to rip off participants financially. They even listed a charge of 5.00 DM (about $3.00) for confirming flight reservations! The sadness is that such tactics will inevitably be partly blamed on the German hosts - and our hosts do not deserve that. I myself was magnificently treated by my German colleagues and I am very sorry indeed that they were so ill-served by the agents they chose to operate the conference. I hope the Spain conference will be cheaper.

By the way, there were 21 Australian participants, a hell of a lot more than participants from many European countries!!

W.D. Williams

(See later in Newsletter for the Photo!)

JABIRU 1990

WETLAND RESEARCH IN AUSTRALIA

We are proposing an informal session on this topic for Friday evening. The aims are to foster communication between scientists presently working on wetlands projects and to develop a national perspective on wetlands research. The emphasis will be on wetland processes.

The proposed format is a series of short presentations giving a state-by-state synthesis of research into, and pertinent to, wetland ecology. (The full text of each presentation will be available at the session as a background document). This will be followed by discussion, and the topics to be covered are:

* future directions for wetlands research

* the development/potential/need for a common data base

* Australian wetlands, an international perspective/responsibility

* How to build on the 1986 World Wildlife Fund initiative on wetland conservation

We hope that one person from each state will volunteer to give each presentaion (and will let us know by Christmas!)

Ideas and volunteers are welcomed.

Dr Jenny Davis
Biological and Environmental Sciences,
Murdoch University,
Murdoch, WA 6150

Phone (09) 332 2628
FAX (09) 310 3505

Dr Jane Roberts
CSIRO Division of Water Resources,
Private Bag No 3 P.O.
Griffith, NSW 2680

Phone (069) 620 571
FAX (069) 627 362

STATE and TERRITORY AFFAIRS

South Australia

Correspondent : Naomi Rea, Botany Dept. Adelaide University.

The reassuring turn out from South Australia at the Canberra conference confirmed the long-lived establishment phase of these perennial types. Some have even entered the recruitment phase and third year students at Adelaide University have fresh updated courses called Aquatic Ecology in the Botany Dept. and Freshwater Ecology in the Zoology Dept. A too-little-acted-upon merger between departments may soon facilitate a veritable breeding swamp of limnological things. Each course is complete with annual field trips. This year the vital attributes of macrophytes were unearthed in Bool Lagoon and the effect of depth gradients and sheep-grazing upon these measured. And on Kangaroo Island the roughness elements and associated F & F of the Rocky and South-West Rivers were explored by zoological echoes of the Famous 5. Meanwhile some recent germinations have passed the survival phase. Shane Brooks studyng the effects of disturbance in the Finnis River had his prayers answered by God's once in a blue-moon flood and computer wizz Marcus Brownlow started a phD with GGG. His aim is to classify the wetlands (and their vegetation) of the south-east before using the inground Botany ponds to investigate macrophyte interactions.

At the E.W.S. Phil Suter, John Cugley and Renate Velzeboer are using Jorg Imbergers Dyresm Destratification Reservoir Model to make predictions about Myponga Reservoir. Renate spent 2 weeks in Perth coming to grips with the maths whilst back here the phantom midge continued to haunt the Adelaide consumer by slipping into the drinking water when it moved nto the thermocline at night. An algal blooms conference of.the Marine Science association in December will also attract Jean Cannon and Tony Cheshire whose research on dinoflagellate 'red tides' has the politicians at their feet and oyster lovers gasping. They hope that at least little Alexandrium minutam is enjoying her trip around the world's great harbours.

Another unplanned release may also be monitored by Jim Puckridge whose fish migration project in the Cooper Creek is in full flow, Qld Fisheries had bred a large number of sizeable Murray Cod in a dam within the Cooper catchment. This years especially heavy flooding has distributed them somewhere within

! On a brighter note Mike Geddes and Martin Smallridge attracted 80 participants to their Yabby Aquaculture day.

Visitors, just a few, Philippe Gerbeaux came by with his thesis of Lake Ellesmere (Christchurch) under one arm, to see Australian shallow turbid waterbodies with *Potamogeton* and *Ruppia*. Paul Boon showed some exciting results in his seminar on bacteria and exoenzymes in the Murray River region, gave some third year lectures and is now writing with Andrew Boulton. Prof. Courtney from Florida of exotic fish fame gave Lance Lloyd a day to reflect on his mentor and lastly more like a resident than a visitor, Russ Shiel on his way around the world dropped in with enviable confidence about the limb movements of *Daphnia*. He and WDW took in SIL. Meanwhle, George Ganf is back at Windermere after touring Austrian/Italian lakes, having found that at 6m the temperature was just right for cooling wine in Lake Constance.

Western Australia

Correspondent : Fiona Whittles, B.E.S. Murdoch University, Murdoch, W.A. 6150

The most significant event in Western Australian limnology is of course the devastating loss to the Wetlands Group at Murdoch of yours truly (who, rumour has it, is fleeing to NSW to become a flower child). "But if you go, who will organise drinks and lunches out?" my colleagues cried, no mention of wetland classification projects crumbling. Meanwhile Jenny Davis and Mark Lund returned inspired, and sunburnt from SIL. After seeing Mark's photos of the Englischer Garten in Germany one is tempted to enquire as to the extent of the sunburn?

Kerry Trayler has joined Adrian Pinder in the eternal fight against midges, whilst Sue Harrington has evolved to murdering terrestrial insects at the Agriculture Department. As its my last chance I may as well talk about myself again, having just returned from a trip to the mighty Cooper Creek in South Oz. The Creek flooded for the first time in 13 years so someone had to be there with their plankton net didn't they? I also forced myself to do a brief study of the invertebrate communities of the hot bores in the area. Sampling in a kilometre long spa bath is pretty tough I'll have you know!

Victoria

Correspondent : Leon Barmuta, Invertebrate Survey, Museum of Victoria, 71 Victoria Crescent, Abbotsford, Vic. 3087.

Life in the log-layer continues as before but with a few changes of address and circumstance.

Victoria bids a fond farewell to Peter Jackson formerly performing superhuman feats in championing the cause of freshwater fishes in the Department of Conservation, Forests and Lands. Peter has left to take up the cause in Queensland where there are more species and even more rain. We wish him every success.

CFL has heaved another sign of relief at the departure of an itinerant bug-pusher and computer nerd : i.e. me. I am currently pretending to be Richard Marchant working with Bruce Chessman on classifying Victorian streams using invertebrates. Richard is now pretending to be a permanent employee at the same address, and was last heard muttering "not another bloody meeting". Meanwhile Phil Mitchell has left the Museum to be permanent at the Rural Water commission. Are you confused yet?

Lastly, moves are afoot to kick-start the Victorian Chapter meetings again. If you want to speak, find a venue or dob someone in, write to this address. Meanwhile, back to the greenhouse; keep breathing folks, it's our only chance.

Tasmania

Correspondent : Peter Davies, Inland Fisheries Comission, 127 Davey Street, Hobart Tasmania 7000

Things are thrumming in the Isle of Little Green Apples! Dr Peter Tyler made limnological history by having the minutest details of his latest international sojourn plastered all over the back page of the Weekend Australain (we are expecting claims of a beat-up in Media Watch or allegation of a funicular cover up, but all was quiet). Alistair Richardson skimmed over the northern hemishere gathering amphipods from various terrestrial and aquatic habitats in Hawaii and Canada. Alistair, Roy Swain and Mark Nelson are continuing a study of leaf pack processing in our Southern Forests in the fervent hope that the neighbouring forests will be logged - a

process delayed by another review of logging practices and Estate listings. Pierre Horwitz has just started fieldwork on an investigation of habitat requirements of *Astacopsis gouldi* and effects of fishing pressure after having organised a sucessful symposium on conservation of rare species. Stephan Eberhard and Alistair continue to feel around in (wet) caves for troglodytes, Jean Jackson overturns all preconceptions about Conoesucids by searching through their chromosomal dirty linen while Premek Hamr writes and writes and....

Inland Fisheries continues apace with yet more studies of pesticides and their beneficial effects on streams, highland lake fauna and endangered fish species and has just broken its own record by employing a now mentally warped student for 5 months continuously sorting surber samples! All praise to Stephen Mallick who came to regard forcep shuffling as a higher means of examining the direction of Western Civilisation. Ever seen anyone with a book of Rembrandt sketches in front of his sorting tray while listening to Hamlet on a Walkman? Wayne Fulton bravely tries to write up his shoal of whitebait data while coping with a local netting boundary furor and Peter Davies has just escaped from desk straps after writing up yet another expose of the foul Derwent Estuary. Andrew Sanyer is now paddling over the blooming face of Lagoon of Islands searching vainly for signs of phosphorus at any cost while John Dingle embarks on a field project in small stream hydrology and the dynamics of trout populations while avoiding feuds between the local gun toting hillbillys between whom his sites are unfortunately divided ! Visits from OS include a World Bank supported stay for three months by Dr Damardi Goenarso from Bandung, Indonesia, here to learn some fish assay techniques and collaborate in Inland Fisheries' pesticide work, and a hydrology student form Freiburg, Germany to assist John Dingle.

South East Queensland

Correspondent: B.J.Pusey, CCISR Griffith University.

Not an awful lot has been happening in this part of the world, especially since most of us have been spread over most other parts of the world. Several members of the Centre travelled to Canberra for the Congress, some by plane (the good old days), others by vehicle. A much more civilized car ride was enjoyed this time, no doubt due to the choice of company.
Angela, Stuart and myself travelled to Munich in August for the SIL congress, which turned out to be very pleasant and most worthwhile. Angela had been jetsetting for about a fortnight beforehand, visiting too many places to mention here while Stuart and I had to be content with London and Munich. Readers of the latest issue of "Ripples" would no doubt be impressed by Paul Boon's command of the German language. After several evenings of continuously repeating "Ein Weissbier bitte!" he could say it perfectly.

Angela, on return from Europe, travelled to Townsville for the ASFB meeting on Magnetic Island. Jane Hughes, Pete Mather and Brad Congdon also attended the meeting and all agreed it was an excellent conference and workshop on exotic fishes. Jane has resurrected her artificial ponds and is confident that they (and her) will survive the next wet season. She is now looking for private sponsors to supply plastic outdoor furniture and some potted palms.

Recent visitors to Queensland include Peter Cranston and Don Edward, both in search of rare chironomid larvae. By coincidence, the best place to look for them was on Fraser Island. The particular beast, the name of which permanently escapes me, was duly found. Peter was also helping the Centre identify chironomid larvae (the result of misinterpreting an appeal for assistance for an offer of yet another chocolate eclair) and introducing us to the arcane secrets of chironomology. I was fortunate enough to be unavoidably detained in the west by the pilots and so missed most of it (including a trip to Fraser Island). Don Edward caught the bus from Perth to Brisbane and spent only a few days here, by the end of which he could almost straighten himself to his full height.

Meanwhile Stuart and I continue to compile limericks for a special issue of the Bulletin. Several quaint ditties were collected from Munich including some inspired by the awesome sights witnessed in the Englischer Garten.

The next step towards a biological council of Australia:

the AUSTRALIAN INSTITUTE OF BIOLOGY & a BIOLOGICAL COUNCIL OF AUSTRALIA
Their roles and relationships

A J Wicken and F D Fanning

Faculty of Biological and Behavioural Sciences, the University of NSW, Kensington.

The concept of a Biological Council of Australia (BCA) has arisen in response to the need for a major improvement in lobbying and support for the advancement of biology in this country. Biology is represented by far more professional and learned societies in Australia than any other scientific discipline. Yet we have no coherent voice in the decision-making arena in Canberra, despite the fact that biology, in its broadest sense, is the most important area of science in this country (45% of our exports are biologically based).

Furthermore, whilst we can readily import overseas developments arising from research in the physical sciences and engineering, we have to solve our own biological problems in our particular part of the biosphere. Our environment is unique to Australia and many if not most of the problems associated with the effective management of that environment are also unique. Understanding and effectively managing our intact wilderness areas and utilizing aboriginal knowledge of our fauna and flora are vitally important. We probably have an understanding of only some 10% of the nation's biological diversity, and consequently cannot yet fully identify the biological resources that are potentially available to us.

Basic biological research over the full range of the biological disciplines is essential to understanding and preserving our natural heritage and to improving our ability to respond to threats to our community and environment. Biotechnology, for example, has been targeted by DITAC as a priority area for new industrial development. In order to capitalize on our existing strengths, we must ensure a greater commitment to basic research in those disciplines which underpin biotechnology, such as molecular biology, biochemistry, genetics, cell biology and microbiology. Simultaneously, applied research into existing and potential problems that menace our biosphere must be regarded as a real national need. Eradication of the sheep blowfly or conservation of

our soils and natural resources are clearly vital to the future of Australia.

It is of the highest priority that we maintain a continuing supply of highly skilled, talented and energetic scientists. These will be our most important national asset and the source of our future competitiveness. We must recruit from 'the brightest and the best' in the country and ensure that they are given the resources and conditions necessary to keep them here and to maintain their innovative productivity. This is an investment which will pay enormous dividends and one that this country cannot afford, for its future, not to make.

OBJECTIVES OF THE ORGANIZATIONS

The Australian Institute of Biology Inc. (AIB) is the successor to the Institute of Biology in Australia, which comprised the Australian branch of the British organization. The primary objectives of the AIB are :

* to represent the biological profession in Australia;
* to advance the science and practice of biology;
* to promote education and research in biology;
* to improve communication between biologists;
* to provide advice to all levels of government, other organizations, the community and individuals.

These objectives, along with its role in the professional accreditation of biologists (as occurs with other professions in our society, such as engineers and architects), are indicative of the broad scope of the Institute. The AIB is concerned with all biologists, researchers and teachers, across the wide spectrum of endeavours which comprise the modern discipline of biology.

Provision for the establishment of a Biological Council is a significant element in the Constitution of the Australian Institute of Biology. Clause 2 (5) states in part that one of the objects of the AIB is :

"To form, or be instrumental in the formation of a Biological Council of Australia, a body comprising corporate members being non-profit associations within Australia concerned with biological teaching or research or with the application of biological knowledge..."

The proposed Biological Council of Australia is an initiative of the Australian Institute of Biology, although it is intended to be a separate and independent body. The principal objectives of the BCA will be :

* to encourage Government and Industry to provide improved facilities for education and research in biology;
* to apply biological knowledge to the benefit of all peoples;
* to promote all aspects of biological research;
* to improve communication between biological societies;
* to promote biological educatifon in schools and recruitment of future biologists.

Clearly, the goals of these two bodies are very similar in many respects. Both the AIB and the BCA are concerned with a national and 'global' view of biology, and with promotion of the importance of biological science in our society. Furthermore, both are interdisciplinary by nature, encompassing all fields of biological endeavour.

There are, however, differences between these sets of objectives. The AIB, in addition to the promotion of biology in general, is concerned with the accreditation and support of individual biologists in the free and open dissemination of knowledge. This is a vitally important function and one to which the Institute is ideally suited. The BCA, on the other hand, will have as its focus the promotion of biology on the broader scale, communicating primarily with biological societies rather than with individual biologists and lobbying at the highest levels in the government and corporate worlds.

ACTIVITIES

The Australian Institute of Biology and the Biological Council of Australia, as indicated above, are intended to promote the profession of biology and to raise its profile in Australia. We regard the two organizations as complementary and the principle differences reside in their constituent memberships and their 'modus operandi'.

The Australian Institute of Biology is designed, like its British parent, to provide recognized accreditation to professional biologists throughout Australia. Membership is attained by election to the Institute following scrutiny of each application by a Credentials Committee, with applicants being elected to anappropriate level of membership. Election to Member or Fellow

(including Honoraria) entitles the member to append the postnomials (MAIBiol or FAIBiol, in line with other professional bodies. In association with this accreditation, the AIB requires all members to conform to a Code of Professional Conduct, as follows

"Every member of the Institute shall at all times so order his conduct so as to uphold the dignity and reputation of the profession of biology and to safeguard the public interest in matters of safety and public health and otherwise. He shall exercise his professional skill and judgement to the best of his ability and discharge his professional responsibilities with integrity."

These twin elements of accreditation and establishment of a Code of Professional Conduct for all biologists are of prime importance, and are viewed as properly the role of the AIB.

The AIB also has a vital role in the promotion of biology and in lobbying at all levels of government and in the corporate sector for the advancement of biology. The Institute is involved in the promotion of biological education at secondary and tertiary levels, and in opposing the insertion of non-science (for example, the so-called 'creation science') into the biological curricula in Australia. As indicated above, it is vital for the future of this country that we ensure the education to the highest standards of our youth. Additionally, it is important that lobbying of governments and industry continue and broaden its involvement through the AAS and FASTS.

Raising the public profile of biology in Australia requires that the AIB comment in the public arena on matters of biology. The right of biologists to publish and to speak on biological issues without hindrance has been defended in the past. At its recent AGM, the AIB produced a supporting statement on the scientific committee established to review environmental research in the southeast forests of NSW. The AIB also has an important role to play in encouraging and improving communication between individual biologists.

The Institute also has an important role in the presentation of conferences, symposia and seminars. The recent conference in Armidale (July 1989) involved not simply a discussion of Ecology, but included presentations on the philosophy and ethics behind our application of ecological knowledge. This approach to biological questions arises because of the broadly-based nature of the Institute. Successful seminars have been held on creatifonism and

bioethics, and the 1990 conference is planned to involve politicians and economists in the questions of ecology and the use of our environment.

Other significant activities of the Australian Institute of Biology include the establishment of State branches which run their own seminars; the maintenance of a national register of environmental consultants; publication of "The Australian Biologist", the quarterly journal of the Institute; and publication of specialist books in Australian Studies in Biology series with University of NSW Press.

Like the AIB, the Biological Council of Australia will have as its major function the promotion of the profession of biology. To attain this goal, the BCA will aim to strengthen the 'biological voice' in FASTS and at senior and central levels by the development of a unified 'biological voice'. This will be achieved by the Council promoting co-ordination of and communication between biological societies within Australia, an important role which largely is not addressed at present. The development of a Biological Council within FASTS, albeit not limited to operating through FASTS when particular biological issues arise, has been welcomed by that organization. It will complement the Mathematical and Earth Sciences Councils already affiliated with FASTS. These bodies are effective because they can make quick responses to immediate issues.

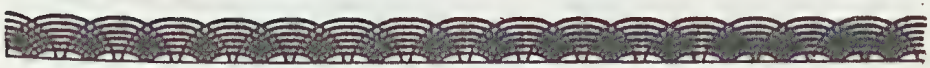
The Council is intended to be able to present the response of biologists as a professional group to issues of importance, including the greenhouse effect, the effects of federal science and education policies and the consequences of corporate actions (or inactions) . In this regard it has a similar role to that of the AIB. The activities of undertaking central, direct and high-level lobbying (to federal politicians, senior federal bureaucrats and at top corporate levels), and the promotion of biological education, especially at Federal and Corporate levels, are also similar to those of the AIB . The differences in these regards between the Institute and the Council are reflected in their constituent memberships, which will, in the medium term at least, lend each a different weight in making comment.

It should be noted that the role of the BCA in promoting a unified "biological voice" does not preclude individual scientific societies from expressing their views on any issue publicly, but is rather intended to reinforce such expressions.

MEMBERSHIP

Perhaps the clearest differential in the roles of the two organizations is reflected in their constituent memberships. The Australian Institute of Biology consists of individual biologists from all fields of biology, including scientists (government, corporate and private), teachers at senior secondary and tertiary levels and tertiary biology students. The Biological Council of Australia, on the other hand, is intended to be a confederacy of biological societies. The BCA will therefore have a substantial membership, comprising the members of its constituent societies, from its formal inception, enabling it to speak with considerable authority.

We see the roles of these two organizations as complementary, with the AIB operating on a more personal level, supporting individual scientists and making public comment on any issues of biological importance. The AIB is also to support biology in schools and at tertiary institution level, to lobby for the advancement of biology at federal and state levels and through FASTS, and to heighten public awareness by running seminars and conferences. The BCA is seen as an organization to lobby within and through FASTS as a unified biological grouping, to communicate directly with federal ministers on issues which arise at the national level and across all aspects of biology, as well as to improve communication between biological societies. Both organizations have important and valid roles to play in strengthening the voice of the biological profession in Australia over the next decade and into the twenty-first century; an effect which is vital for the future of this country and the planet.



The Fate of AWRAC ???

Some notes from FASTS on the:
CORPORATISATION OF PRIMARY INDUSTRIES AND ENERGY RESEARCH AND DEVELOPMENT ACTIVITIES

"Corporatisation" may not be a word you will find in a dictionary but it nevertheless has many different meanings. This latter was the impression given to FASTS' President Professor Frank Larkins and Executive Director Dr DavidWiddup when they spoke with John Kerin, Minister for Primary Industries and Energy and his advisor Marie Keir in Canberra on 18 August.

"Corporatisation" for wool would be very different from "corporatisation" for water; the new corporate structure for Primary Industry and Energy it seems will be very similar to the status quo. Corporations would be established according to the Minister, to allow for joint-ventures with industry but even that is not a radical nor necessary change. The Government can enter into joint ventures on behalf of existing Councils. Scientific and technological expertise will be maintained said the Minister, and when FASTS mentioned any diminution of support for research Mr Kerin broke in to defend his record of increasing support for R & D.

The Minister really did not argue when FASTS suggested that the reports calling for corporatisation were fairly short on detail of mechanisms of how this would be achieved. And the Minister agreed that there had not been sufficient consultation in the preparation of those reports.

So what have we got to worry about? Professor Larkins left the Minister with a copy of the following 10 points on "Corporatisation of Primary Industries and Energy Research and Development Activities". The Minister will answer these in detail and then FASTS will decide if a campaign is needed to defeat the legislation.

Opposition Spokesperson on Science and Energy, Peter McGauran, has already attacked the corporatisation in a statement released to the press on 31 July saying, "The narrow commercial focus of the new corporate research bodies would only serve to decimate the existing long-term science research effort which ensures the international success of Australia's primary sector."

It has been suggested that "corporatisation" might be used to replace the virtually banned word "privatisation". We will know if the concepts are different when the Minister replies.

AREAS OF MAJOR CONCERN

1.Reduced Total R & D Expenditure

There is a general concern that Corporations will be a device through which Government reduces its commitment to real R&D in Australia. Coal research is a specific case where it has been estimated that the national research effort will drop by the order of 40 to 50 per cent and that within 3 years a coordinated effort could be non-existent. In the areas of mining, forestry and fisheries, and in the strategic areas of soil, water and alternative energies, there would seem to be little enthusiasm for the Government proposals.

2.Industrial R & D Horizons Narrowed

Tailoring research closely to the needs of existing industries and established companies will restrict research that will create new industries and generate new companies. There will be a move by oligopolies to strengthen their market share through greater control of the research to be carried out and thereby reduce opportunities for start-up organisations. Corporate interest is not always the national interest.

3. Independence of R & D Corporations

The independence and integrity of Corporations is questioned. Boards will be required to prepare strategic plans and annual operating plans which will require ministerial approval. Furthermore, many boards will be dependent upon Government for the major proportion of their funding. Both of these issues raise significant questions concerning the independence of the boards. The selection of members to the board is also in the hands of industry such that there is a concern that large companies within an industry sector will dominate at the expense of smaller companies. This matter of a board which is truly representative of the industry sector raises questions concerning the integrity of a Corporation.

4. Corporation membership - lack of scientific expertise

The structure ignores the fact that in many areas research expertise can only be found among a relatively few scientists and technologists. Others are not in a position to assess research proposals. Corporatisation without this scientific and technological base cannot work. If it includes this base then the process will just add another layer of bureaucracy to the present R&D Councils.

5. Strategic research areas

In many strategic research areas such as alternative energy sources, water quality, soil conservation and environmental management, a distinct industry cannot be readily identified. There is concern that such important national long term research will not be sponsored by Corporations. A corporatisation model may not provide adequate safeguards to ensure that national strategic priorities are addressed. Furthermore, the preparation of a five year strategic plan is too short in such areas.

6. Research management

The CSIRO OA commissioned survey indicated that 85 per cent of Australians want R&D managed by scientists and engineers. Many favoured input by industry. This is satisfied by the present R&D Councils. The same survey showed very little support for R&D decisions to be made by bureaucrats or politicians.

7. Administrative costs

It has been a matter of concern that the management costs for the new Corporations will be much higher than those to R & D Councils. If corporations are truly independent of Government there will be the need for duplication within Government since many of the proposed corporate bodies will not be financially viable without substantial government appropriation money. One would not expect some money to be provided without significant monitoring and accountability. This will inevitably involve a major public service effort in Canberra.

8. Departmental expertise

Links between the Department and researchers will be weakened. Sound advice to Ministers requires their advisors to have a good network covering all aspects of the portfolio management. Currently departmental policy formulation benefits greatly from the contacts established by departmental officers with scientists and technologists through administration of research grants. This will no longer be as readily available.

9. Ownership of intellectual property

Experience would suggest that there is little value in research and development agencies holding patents in their own right. if the technology is to be transferred to the private sector and then developed to achieve a commercial return for Australia, it is essential that the intellectual property be owned by the industry. Research bodies, if necessary, can achieve a return through royalty payments or other mechanisms. Research boards should not become research and development companies in their own right.

10. Mechanisms for raising funds and stimulating research
The document fails to identify how corporate R&D bodies will be in a stronger position to raise research funds, especially in areas of national interest. NERDDC is an example where the multiplier for the Government R&D investment is of the order of a factor of 3. The new Corporations are unlikely to achieve a better performance.

.....Professor F.P. Larkins President FASTS

A further note from FASTS - a fundamental change in the Government's philosophy on science

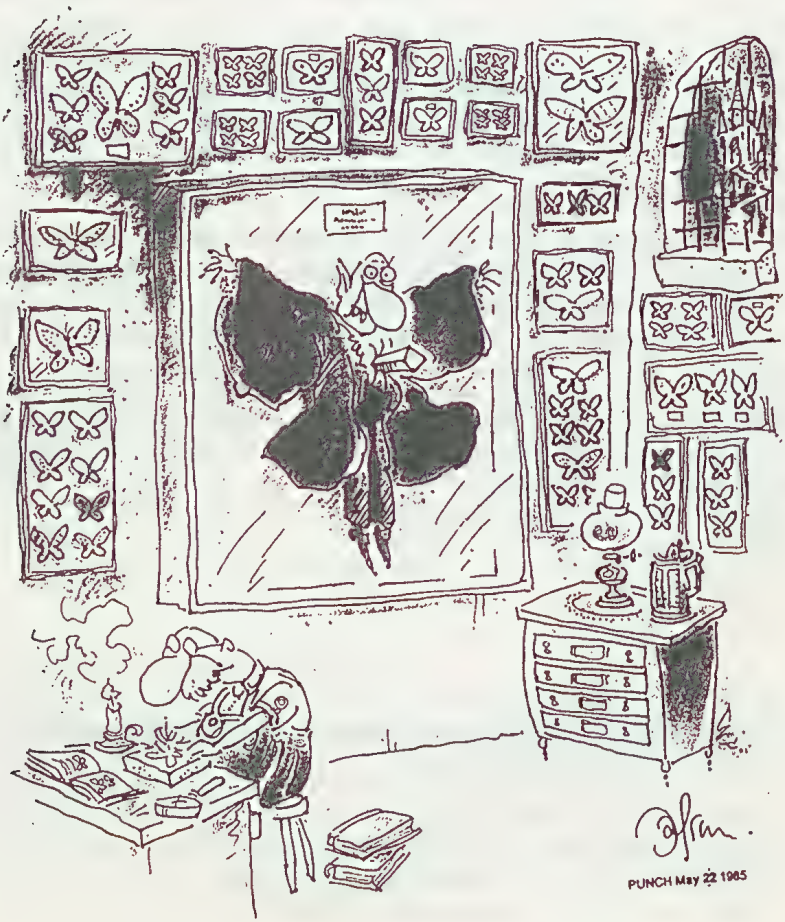
Speaking at the 28 August National Science Forum, Barry Jones, Minister for Science indicated a fundamental change in the Government's thinking on science. The Minister said, "There has been a recognition that the rigid application of market force economics, however appropriate in other areas, has not been particularly useful or appropriate in research, where outcomes are inevitably uncertain, a longer time horizon is needed than in many Budgetary areas, and where it is important to give signals to the community generally, to industry and to research workers."

He restated what he said was the philosophy of the May Science Statement: "that the relationship between science and technology is extremely unpredictable and complex, the simple 'pure' and 'applied' dichotomy is increasingly blurred in practice and the concept of 'relevance' changes so rapidly as to be unhelpful in practice". And he added that: "These changes in philosophy are important - like an official recognition that the earth revolves around the sun. That acknowledgement has value in itself, quite apart from the money".

INFORMATION WANTED!

Re: Historical accounts of past management and use of wetlands in Victoria, and for other states. Any documents regarding past wetland policy would also be appreciated. Required for Masters research, preferably before March '90.

Contact : Luigi Truda
R.M.I.T.
Faculty of Environmental Design and Construction
GPO Box 2476 V
Melbourne 3001
Ph (03) 660 2226 ext 6
FAX (03) 663 2764



FIRST INTERNATIONAL SYMPOSIUM ON EUPHYLLOPODS

The First International Symposium on Euphyllopods (Anostraca, Notostraca and Conchostraca) was held in Ghent, Belgium, from 9-11 August 1989. Highly successful, some 40 participants from a wide variety of countries attended and read papers dealing with all of the groups on which the symposium focussed. Although the symposium had its original concern with aquaculture, many of the papers dealt with non-commercial aspects of their biology. The proceedings are to be published by Kluwer, Dordrecht, and will be a most valuable addition to the literature on this most interesting but apparently neglected group of crustaceans. Plans were made for a subsequent meeting.

The highly focussed and common interests of the group ensured the success of the symposium; such small symposia have a great many advantages not enjoyed by the large international symposia (e.g. SIL which followed immediately afterwards in Munich). Not the least of their advantages is their small registration costs. Congratulations, Henri!

W.D. Williams
11/9/89

Professor Williams enjoying the stimulating company at SIL.

BOOK REVIEW

LAKE BROADWATER, the Natural History of an Inland Lake and its Environs.

Editied by Gillian Scott. Darling Downs Institute Press, Darling Heights, Toowoomba, Qld 4350. RRP $24.95. (Obtainable also from The Broadwater Natural History Association, PO Box 737, Dalby, Qld 4405.)

Reviewed by Brian Timms, Avondale College, Cooranbong, NSW.

This 344 paged book reports the results of a 'five-year study of the taxonomy and ecology of the plants and animals associated with the lake and its surrounding environmental park'. It all began in 1982 when a small band of keen local naturalists meeting as the Broadwater Natural History Association voted to begin a comprehensive study of the area as their contribution to the Australian Bicentennial Celebratons. Besides doing much of the groundwork, helping in survey teams and doing some of the studies, they enlisted many experts to help. The resultant book is packed with all kinds of information so that 'there is something in the book for every biologist'.

There are 36 chapters arranged into 7 sections. In the 'Introduction' there are essays on how the work started and an ecological overview. This is followed by the 'Physical Structure' being covered in three chapters - geomorphology, soils and climate. The 'Vegetation' of the park takes 9 chapters to describe and includes an account of the shore vegetation and its zonation. 'Lake Biology' is treated in 5 chapters, with accounts of the algae, aquatic invertebrates, fish and parasites of fish. There are 10 chapters on various 'Terrestrial Insects' including ones on dragonflies and mosquitoes of interest to limnologists, followed by 4 on 'Vertebrates' including one on frogs, and finally 3 chapters on 'Anthropology'.

Many chapters have extensive species lists and tables of basic ecological data. There are many black and white line diagrams, with those by Betty Temple Watts quite outstanding. In addition a few chapters are illustrated by black and white photographs of generally good contrast.

The authors range from experienced naturalists, both local and from Brisbane, to high school biology teachers (one, Judith Grimes who wrote the chapter on algae has a PhD), to 'retired' scientists

(including Dr Gillian Scott, a marine biologist lately of Capricorn CAE, and Dr Ian Common of Lepidoptera fame recently of the CSIRO) and to active University, Museum and National Parks scientists. Examples of the latter group include Dr A. Cribb, Dr G. Monteith and Mr R. Allison from Brisbane. So the authors are not doddering out-of-touch ancients obsessed by finding some rare greenhood orchid, but are a team of well researched 'amateurs' and professionals. Certainly the style is not quite what one is used to in more prestigious works as there are explanations of basic words for the uninformed reader, no constipation of strings of adjectives and big words and no unintelligible latin phrases. I like it!

Generally the pages are well composed, but there are a number of typographical errors, usually involving single letters but a whole line or more seems to be missing on p39, second column, line ca.6. The most serious error is the complete omission of Tables 1 and 2 in the Geomorphology chapter. There are also some fairly obvious numerical mistakes in the tables in the Climate chapter.

I will now make some specific points on the chapters likely to be of particular interest limnologists.

Judith Grimas' chapter on algae is essentially a taxonomic account of the 308 taxa identified from the lake and pools of the inflowing creek. The text is not that well written in places - have collected a few clangers for my scientific writing class, e.g. 'If an ecological system is to be successful, there needs to be a natural flow of energy', 'sampling signts (sic) were the same as the zooplankton in the lake', and 'although normally phototrophic, Volvox is able to absorb soluble nutrients'. The strength of the chapter is its species list and the 224 illustrations of ca. 210 species. Those of diatoms take the form of black and white photographs of uneven contrast and quality, but the species are still recognisable. Since the figures are the most comprehensive that I have seen for any Australian temperate lake, I suspect they will be used far and wide as an identification guide.

The chapter on Aquatic Invertebrates by Gillian Scott is patchy. She specialises on plankton, particularly crustaceans and protozoans (i.e. Protista - yes, another author who is not with the modern five kingdom classification system). Her diagrams are generally inadequate for others to use for identification purposes - even the cladoceran Bosmina which is easy to draw is hopelessly misshapen. The identification of a rotifer as Brachionus baylyi is almost certainly invalid. This species is planktonic in coastal

brackish lakes like Myall Lake, near Newcastle, and for it to be found in weedbeds in a freswhater lake in the inland would be remarkable. Dr Scott also uses the name Daphnia longicephala not realising that it has been synonymised back into D.carinata again. The author is concerned that only a few species of copepod are present and she consoles herself in Shiel's reports of the Darling Range system (to which Lake Broadwater is connected) being characterised by a less diverse fauna and a preponderence of rotifers. However this is a basic misunderstanding as Shiel's study was concerned with lotic waters and Lake Broadwater is lentic. The presence of two euplanktonic copepods of the general Boeckella and Calamoecia is about normal for eastern temperate Australia.

I have no argument with the remainder of the chapter on Aquatic Invertebrates, but I am concerned about what it does not say! Mention is made of a few benthic and nektonic animals such as shrimps, snails, worms and mussels, but curiously no insects. I find it difficult to believe that Lake Broadwater lacks forms such as chironomids, notonectids, corixids and coleopterans, to mention a few ubiquitious orders. Perhaps they were intentionally omitted, but a reader like myself should have been warned a disappointment was in store. Anyway it means the chapter should be retitled for it tells only half the story.

The Bony Fishes chapter by Raymond Leggett is to be remembered for the illustrations by Betty Temple-Watts. Nevertheless its punchline is important for 3 (Mosquito Fish, Carp and Goldfish) of the 13 species are introduced. Apparently Mosquito Fish are abundant and could be interacting adversely with smaller native fish, not to mention some invertebrates. Its presence in Lake Broadwater must detract from the conservation value of the park.

The final chapter in the Lake Biology section is a short account of some parasites found in the Lake's fishes. It highlights our lack of knowledge of these animals in Australia.

In overview, I found the book interesting and readable, despite it being a mainly systematic account of the wide array of organisms in a park 1000 km from my abode. I must include a visit to the area on my next itinerary north, if for nothing else but to view firsthand what a team of dedicated people can do for our threatened and disappearing natural environment. Full marks to them!

Certainly their book is not perfect, but I do recommend it to those with a broad (no pun intended) view of lakes, to those preparing comprehensive environmental statements for any reason or purpose, to biogeographers, to algalogists, to ichthyologists, and despite my arguments with Dr Scott's chapter, perhaps even to planktologists. There is little in it for physical limnologists, potomologists and benthologists, but you cannot please everyone, despite what the book claims in its Introduction. Perhaps the Broadwater Natural History Association would welcome contributions from these for a second edition.

DESIGN A POSTER FOR ASL !

Theme:

ASL in the '90 s

Send your entry to the Editor, or bring it along to Jabiru for judging. Big Bucks $$$ Prizes $$$

AN ECOLOGICAL LAMENT: THIS IS THE DAWN OF THE BIOTECH SPAWN

Ken Cummins

I'm feeling obliged to confess my obsession
Stream ecologist am I, it's my chosen profession
Doctors and lawyers may think it insane
Earning less than a plumber who fixes your drain
With a mind set of twenty four hour dedication
You practice your trade even while on vacation
Working out papers on the slate in your head
While lying there tossing and turning in bed
This consuming fascination with populations, and so on
It's the fire that enables us to continue to go on
working on ecosystems is a task clearly arduous
Which so often appears incredibly hard to us

While white-coated scientists protected in labs
Tinker with molecules from the eye stalks of crabs
It takes little effort, nor scientific defiance
Just extract some rat liver and publish in Science
Something 3,5 dimethyl is really the way
'Cause studying nature is really child's play
A paper molecular will be read with excitement
As ecological fare receives editorial indictment
Our barely intact world is of limited interest
Helical molecules constituting our real quest
So, tell me again while it's considered so fair
For promotion and prizes to always compare
Work in a test tube using someone else's machine
With research on natural systems considered unclean
Don't worry if organisms keep disappearing
Simply await reconstruction through bio-engineering
Who cares if we've lost some obscure little frog
Wait till something happens to Aunt Maude or the dog
But take heart ecological comrades in arms
Don't drop out and run off to New Zealand farms
Not to worry if we're not in the Academy National
At least our science seems reasonably rational

(Reprinted from NABS Bulletin 6(2) 1989, with the hope that Ken Cummins would have given permission if we had contacted him.)

>>>>>NEWSFLASH>>>>>>>NEWSFLASH>>>>>>>NEWSFLASH>>>>>>>

(from the Weekend Australian, October 28-29, 1989)

Botanical marathon

WHAT a busy time it is when you're having fun!

Contact, the newsletter of the University of Tasmania, has given the following details of what was clearly a rip-roaring time had by a Reader in Botany, Dr Peter Tyler, during a "brief" European visit:

"Dr Tyler has returned from a brief European journey during which he worked for a few weeks on meromictic Laguna de la Cruz, central Spain, with colleagues from the University of Valencia, photographed alpine vegetation in Austria and Switzerland for first-year plant science lectures, observed Tasmanian migrants in breeding plumage on Baltic and North Sea shores, consulted limnological colleagues at the University of Ghent, revised a manuscript with a colleague in the Forschunginstitut Senckenburg, Frankfurt, was shown acid-rain damage to forests in Schwarzwald and Spessert, wrote a manuscript on ultrastructure of rare Tasmanian algae with colleagues in Leeds, gave a paper at the International Limnological Congress in Munich, gave a seminar at the Botanical Institute of the University of Innsbruck, received a D.Sc at the University of Exeter, gave a paper at the British Phytoplankton Workshop in Antrim, and drank a lot of Guinness in Tipperary.

"Mastercard and the Commonwealth Bank made the journey possible."

CONGRATULATIONS!!

Dr Mike Kokkinn, South Australian Institute of Technology, was awarded the 1988 prize for the best PhD thesis produced in the area of water resources by the Australian Water Research Advisory Council. The thesis was entitled "A control strategy for Tanytarsus barbitarsis Freeman (Diptera: Chironomidae), a small-scale pest organism". The prize was awarded in Sydney recently at an AWRAC meeting at which both Mike Kokkinn and Bill Williams (supervisor) were present.

AIDB Grant to ASL

This year the Society received a grant of $6000 from the Australian International Development Bureau to allow the attendance of three Thai limnologists at the 29th Congress. The grants were made under AIDABs International Seminar Support Scheme and provided funds for airfares, registration and accommodation for Dr Pornthip Chantaramonkol from Chiang Mai University, Ms Nittaya Nugranad from the Water Quality section of the National Environment Board and Mr Vachira Lheknim from Prince of Songkhla University at Haad Yai. Ms Nugranad presented a paper on Water Quality Monitoring in the Ping River.

The three Thais also visited the Centre for Stream Ecology at Chisholm Institute and the Murray-Darling Freshwater Research Centre while in Australia.

1986

MAY, V. & POWELL, J.M. 1986. Algae of the Peel River and the newly constructed Chaffey Dam, New South Wales, Australia. *Cunninghamia* **1**, 503-536.

1987

BANENS, R.J. 1987. The geochemical character of upland waters of northeast New South Wales. *Limnol. Oceanogr.* **32**, 1291-1306.

1988

ANDERSON, J.R. & MORISON, A.K., 1988. Environmental flow studies for the Wimmera River, Victoria. Part A. Introduction, catchment features and hydrology. Fundamental concepts and practical considerations. *Tech. Rept. Ser.* **73**. Arthur Rylah Inst. for Environmental Research.

ANDERSON, J.R. & MORISON, A.K., 1988. Environmental flow studies for the Wimmera River, Victoria. Part B. Fish habitat. *Tech. Rept. Ser.* **74**. Arthur Rylah Inst. for Environmental Research.

ANDERSON, J.R. & MORISON, A.K., 1988. Environmental flow studies for the Wimmera River, Victoria. Part C. Water quality and experimental releases of water. *Tech. Rept. Ser.* **75**. Arthur Rylah Inst. for Environmental Research.

ANDERSON, J.R. & MORISON, A.K., 1988. Environmental flow studies for the Wimmera River, Victoria. Part D. Fish populations. Conclusions and Recommendations. *Tech. Rept. Ser.* **76**. Arthur Rylah Inst. for Environmental Research.

ANDERSON, J.R. & MORISON, A.K., 1988. Environmental flow studies for the Wimmera River, Victoria. Executive Summary. *Tech. Rept. Ser.* **78**. Arthur Rylah Inst. for Environmental Research.

ANDERSON, J.R., HILL, J.M. & MORISON, A.K., 1988. Environmental flow studies for the Wimmera River, Victoria. Part E. Technical Appendices. *Tech. Rept. Ser.* **77**. Arthur Rylah Inst. for Environmental Research.

BARMUTA, L.A. 1988. Benthic organic matter and macroinvertebrate functional feeding groups in a forested upland stream in temperate Victoria. *Verh. Internat. Verein. Limnol.* **23**, 1394-1398.

BRIGGS, S.V. 1988. Research on wetlands and waterbirds in western New South Wales - achievements and needs. *Nat. Parks J.* **32**, 18-21.

BRIGGS, S.V. & HOLMES, J.E. 1988. Bag sizes of waterfowl in New South Wales and their relation to antecedent rainfall. *Aust. Wildl. Res.* **15**, 459-68.

HILLIARD, R.W. & POTTER, I.C., 1988. Morphology of the exocrine pancreas of the Southern Hemisphere lamprey, *Geotria australis*, and changes during metamorphosis. *J. Morph.* **197**, 33-52.

MACEY, D.J., CAKE, M.H. & POTTER, I.C., 1988. Exceptional iron concentrations in larval lampreys (*Geotria australis*) and the activities of superoxide radical detoxifying enzymes. *Biochem. J.* **252**, 167-172.

MAY, V. 1988. Algae of Carcoar Dam, New South Wales, Australia. *Cunninghamia* **2**, 1-7.

MAY, V. 1988. The effect of drought and position in the dam on the algal composition of two dams in New South Wales. *Cunninghamia* **2**, 75-84.

NEIRA, F.J., BRADLEY, J.S., POTTER, I.C. & HILLIARD, R.W., 1988. Morphological variation among widely dispersed larval populations of anadromous Southern Hemisphere lampreys (Geotriidae and Mordaciidae). *Zool. J. Linn. Soc.* **92**, 383-408.

1989

BARMUTA, L.A. 1989. Habitat patchiness and macrobenthic community structure in an upland stream in temperate Victoria, Australia. *Freshwater Biol.* **21**, 223-236.

BRIGGS, S.V. 1989. Guidelines for management of inland wetlands in southern New South Wales. *Wetlands* (Australia) **8**, 1-2.

LEITCH, C. 1989. Towards a strategy for managing the flooding of Barmah Forest. Report of Seminar on Barmah Forest organised by the State Working Group on River Murray Wetland and Forest Management, April 1989. 46 pp.

LING, H.U., CROOME, R.L. & TYLER, P.A., 1989. Freshwater dinoflagellates of Tasmania, a taxonomic and ecological survey, *Br. Phycol. J.* **24**, 111-129.

LING, H.U., THOMAS, D.P. & TYLER, P.A., 1989. Microalgae. *In* W. Zeidler & W.F. Ponder (Eds) *Natural History of Dalhousie Springs.* South Aust. Mus. Spec. Publ.: 47-52.

PIPES, L., TYLER, P.A. & LEEDALE, G.F., 1989. *Chrysonephele palustre* gen. et spec. nov., a new phagotrophic pigmented Chrysophyte from Tasmania. *Beih. Nova Hedwigia* **95**, 81-97.

SUREN, A.M. & LAKE, P.S., 1989. Edibility of fresh and decomposing macrophytes to three species of freshwater invertebrate herbivores. *Hydrobiologia* **178**, 165-

COMING EVENTS

1990

20-23 APRIL ASL 29th Congresss and AGM, Jabiru NT, and Pre-Congress Symposium on the 11th "Water Management in the Alligator Rivers Region". Enquiries: Isabell von Oertzen tel: (089) 792 300, Fax (089) 792 076, Telex 85457.

2-7 JULY International Crustacean Conference, Brisbane, Australia. Contact:- Crustacean Conference Secretariat,Uniquest Limited, University of Queensland, St Lucia, Qld,4067.Ph (07) 377 2733, Fax (07) 870 3313

8-14 JULY. 2nd International Conference: Trace Metals in the Environment, Sydney. Contact: Dr. K.R. Brown, Conference Secretary, Trace Metals in the Aquatic Environment, Uni of Technology Sydney, PO Box 123, Broadway NSW 2007, Australia. Ph (02) 436 6220, Fax (02) 436 6211.

29 JULY-3 AUG International Association on Water Pollution Research and Control (IAWPRC) Biennial'90.Contact: Anthony Milburn, Executive Director, IAWPRC, 1 Queens Anne's Gate, London, SW1 H9BT, England. Ph:441 222 3848, Fax: 441 222 1818.

23-30 AUGUST V International Congress of Ecology "Development of Ecological Perspectives for the 21st Century", Yokohama, Japan. Contact: Secretary General's Office for Intecol 1990, Institute of Environmental Science and Technology, Yokohama National University, Yokohama 240, Japan.

5-8 SEP 1Vth International Conference on the Conservation and Management of Lakes "Hangzou'90". Hangzou, The People's Republic of China. Contact: Mr. Zhang Yuitan, Foreign Affairs Office, Chinese Research Academy of Environmental Sciences Beiyuan, Anwai, Beijing, People's Republic of China. Ph: 4211025, Cable: 1064, Telex: 22505 Booth CN.

1991

MAY XVII Pacific Science Congress, Hawaii. Contact: Dr. Jose Ireneu dos Remedios Furtado, Centre for Integrated Development, 19, Langford Green, Champion Hill, London SE5 8BX, England, UK. Ph (01) 733 8523, Fax (01) 299 0197.

GRIFFER

Ms Naomi Rea
Biology Department
University of Adelaide,
PO Box 498
Adelaide, S.A., 5001.

Dr Angela Arthington
School of AES,
Griffith University,
Nathan, Queensland, 4111

Dr Roger Croome,
RWC, 590 Orrong Rd,
Armadale,VIC. 3143
(03) 508 2667

Dr Ross Hyne
Office of the Supervising Scientist,
PO Jabiru , NT, 5796

Mr Colin Heath
Biology Department
Metro Water Sewage and Drainage Board
PO Box 2, Guildford,NSW. 2161

Dr Peter Davies
Inland Fisheries Comission
127 Davey Street,
Hobart, Tasmania, 7000

Dr Richard Norris
Applied Science, CCAE
PO Box 1,
Belconnen, ACT, 2616
(062) 522 543
Fax (062) 522999

Mr Adrian Pinder
Biological and Environmental Sciences
Murdoch University,
Murdoch, W.A., 6150
(09) 332 2208